



#8
ENTERED

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/006,922A

DATE: 05/16/2002

TIME: 16:03:16

Input Set : D:\seqlist.txt

Output Set: N:\CRF3\05162002\J006922A.raw

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4 <110> APPLICANT: Lukyanov, Sergey A
5   Fradkov, Arcady F.
6   Labas, Yulii A.
7   Matz, Mikhail V.
8   Terskikh, Alexey
10 <120> TITLE OF INVENTION: Novel Chromophores/Fluorophores and
11   Methods for Using the Same
14 <130> FILE REFERENCE: CLON-035CIP
C--> 16 <140> CURRENT APPLICATION NUMBER: US/10/006,922A
C--> 17 <141> CURRENT FILING DATE: 2002-05-07
19 <150> PRIOR APPLICATION NUMBER: 09/120,330
20 <151> PRIOR FILING DATE: 1998-12-11
22 <150> PRIOR APPLICATION NUMBER: 09/457,898
23 <151> PRIOR FILING DATE: 1999-12-09
25 <150> PRIOR APPLICATION NUMBER: 09/458,144
26 <151> PRIOR FILING DATE: 1999-12-09
28 <150> PRIOR APPLICATION NUMBER: 09/458,477
29 <151> PRIOR FILING DATE: 1999-12-09
31 <150> PRIOR APPLICATION NUMBER: 09/457,556
32 <151> PRIOR FILING DATE: 1999-12-09
34 <150> PRIOR APPLICATION NUMBER: 09/444,338
35 <151> PRIOR FILING DATE: 1999-11-19
37 <160> NUMBER OF SEQ ID NOS: 46
39 <170> SOFTWARE: FastSEQ for Windows Version 4.0
41 <210> SEQ ID NO: 1
42 <211> LENGTH: 687
43 <212> TYPE: DNA
44 <213> ORGANISM: anemonia majano
46 <400> SEQUENCE: 1
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48 tgtgtcaatg ggcattactt taccgtcaaa ggtgaaggca acgggaagcc atacgaaggg 120
49 acgcagacct cgacttttaa agtcaccatg gccaacggtg ggccccttgc attctccttt 180
50 gacatactat ctacagtgtt caagtatgga aatcgatgct ttactgcgta tcctaccagt 240
51 atgcccgaact atttcaaaca agcatttcct gacggaatgt catatgaaag gacttttacc 300
52 tatgaagatg gaggagtgtc tacagccagt tgggaataa gccttaaagg caactgcttt 360
53 ggcacaaaat ccacgtttca tggagtgaac ttccctgctg atggacctgt gatggcgaag 420
54 atgacaactg gttgggaccc atcttttgag aaaatgactg tctgcatgga aatattgaag 480
55 ggtgatgtca ccgcgttcct catgctgcaa ggaggtggca attacagatg ccaattccac 540
56 atttcttaca agacaaaaaa accggtgacg atgccaccaa accatgcggt ggaacatcgc 600
57 attgcgagga ccgaccttga caaaggtggc aacagtgttc agctgacgga gcacgctggt 660
58 gcacatataa cctctgttgt ccctttc                                     687
60 <210> SEQ ID NO: 2
61 <211> LENGTH: 229

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 PATENT APPLICATION: US/10/006,922A TIME: 16:03:16

Input Set : D:\seqlist.txt
 Output Set: N:\CRF3\05162002\J006922A.raw

62 <212> TYPE: PRT
 63 <213> ORGANISM: anemonia majano
 65 <400> SEQUENCE: 2
 66 Met Ala Leu Ser Asn Lys Phe Ile Gly Asp Asp Met Lys Met Thr Tyr
 67 1 5 10 15
 68 His Met Asp Gly Cys Val Asn Gly His Tyr Phe Thr Val Lys Gly Glu
 69 20 25 30
 70 Gly Asn Gly Lys Pro Tyr Glu Gly Thr Gln Thr Ser Thr Phe Lys Val
 71 35 40 45
 72 Thr Met Ala Asn Gly Gly Pro Leu Ala Phe Ser Phe Asp Ile Leu Ser
 73 50 55 60
 74 Thr Val Phe Lys Tyr Gly Asn Arg Cys Phe Thr Ala Tyr Pro Thr Ser
 75 65 70 75 80
 76 Met Pro Asp Tyr Phe Lys Gln Ala Phe Pro Asp Gly Met Ser Tyr Glu
 77 85 90 95
 78 Arg Thr Phe Thr Tyr Glu Asp Gly Gly Val Ala Thr Ala Ser Trp Glu
 79 100 105 110
 80 Ile Ser Leu Lys Gly Asn Cys Phe Glu His Lys Ser Thr Phe His Gly
 81 115 120 125
 82 Val Asn Phe Pro Ala Asp Gly Pro Val Met Ala Lys Met Thr Thr Gly
 83 130 135 140
 84 Trp Asp Pro Ser Phe Glu Lys Met Thr Val Cys Asp Gly Ile Leu Lys
 85 145 150 155 160
 86 Gly Asp Val Thr Ala Phe Leu Met Leu Gln Gly Gly Gly Asn Tyr Arg
 87 165 170 175
 88 Cys Gln Phe His Thr Ser Tyr Lys Thr Lys Lys Pro Val Thr Met Pro
 89 180 185 190
 90 Pro Asn His Ala Val Glu His Arg Ile Ala Arg Thr Asp Leu Asp Lys
 91 195 200 205
 92 Gly Gly Asn Ser Val Gln Leu Thr Glu His Ala Val Ala His Ile Thr
 93 210 215 220
 94 Ser Val Val Pro Phe
 95 225

98 <210> SEQ ID NO: 3
 99 <211> LENGTH: 1116
 100 <212> TYPE: DNA
 101 <213> ORGANISM: Clavularia species
 103 <220> FEATURE:
 104 <221> NAME/KEY: misc_feature
 105 <222> LOCATION: 8, 12, 13, 17, 65, 77, 102, 104
 106 <223> OTHER INFORMATION: n = A,T,C or G
 108 <400> SEQUENCE: 3

W--> 109 tatagganca tnnnggngat tgggggtccaa agcattgtaa ccaacgcaga taacccccag 60
 W--> 110 tgggtntcaaa cgcaganaac gcgggaacat tggaaaattg antnttaagg aggcaaggaa 120
 111 tcgggagtaa agttgcgaga aactgaaaaa atgaagtgtg aatttgtgtt ctgcctgtcc 180
 112 ttcttggtcc tcgccatcac aaacgcgaac atttttttga gaaacgaggc tgacttagaa 240
 113 gagaagacat tgagaatacc aaaagctcta accaccatgg gtgtgattaa accagacatg 300
 114 aagattaagc tgaagatgga aggaaatgta aacgggcatg cttttgtgat cgaaggagaa 360
 115 ggagaaggaa agccttacga tgggacacac acttttaaacc tgggaagtga ggaaggtgcg 420

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116 cctctgcctt tttcttacga tatcttgta aacgcgttcc agtacggaaa cagagcattg 480
117 acaaaatacc cagacgatat agcagactat ttcaagcagt cgtttcccga gggatattcc 540
118 tgggaaagaa ccatgacttt tgaagacaaa ggcattgtca aagtgaaaag tgacataagc 600
119 atggaggaag actcctttat ctatgaaatt cgttttgatg ggatgaactt tcctcccaat 660
120 ggtccgggta tgcagaaaaa aactttgaag tgggaaccaa ccactgagat tatgtacgtg 720
121 cgtgatggag tgctggtcgg agatattagc cattctctgt tgctggaggg aggtggccat 780
122 taccgatgtg acttcaaaag tatttacaaa gcaaaaaaag ttgtcaaatt gccagactat 840
123 cactttgtgg accatcgcat tgagatcttg aaccatgaca aggattacaa caaagtaacg 900
124 ctgtatgaga atgcagttgc tcgctattct ttgctgccaa gtcaggccta gacaacaagg 960
125 atactgaaaa catatttgtc tgagggtttg tgttgttttt taaaagacat cagctcagca 1020
126 ttcgttagtt gtaacaaaaa atagctttta tttttggtgg gattaaatca tagggatttg 1080
127 ttttagtaat cattttgctt aataaaaagt gccttg 1116
129 <210> SEQ ID NO: 4
130 <211> LENGTH: 266
131 <212> TYPE: PRT
132 <213> ORGANISM: Clavularia species
134 <400> SEQUENCE: 4
135 Met Lys Cys Lys Phe Val Phe Cys Leu Ser Phe Leu Val Leu Ala Ile
136 1 5 10 15
137 Thr Asn Ala Asn Ile Phe Leu Arg Asn Glu Ala Asp Leu Glu Lys
138 20 25 30
139 Thr Leu Arg Ile Pro Lys Ala Leu Thr Thr Met Gly Val Ile Lys Pro
140 35 40 45
141 Asp Met Lys Ile Lys Leu Lys Met Glu Gly Asn Val Asn Gly His Ala
142 50 55 60
143 Phe Val Ile Glu Gly Glu Gly Lys Pro Tyr Asp Gly Thr His
144 65 70 75 80
145 Thr Leu Asn Leu Glu Val Lys Glu Gly Ala Pro Leu Pro Phe Ser Tyr
146 85 90 95
147 Asp Ile Leu Ser Asn Ala Phe Gln Tyr Gly Asn Arg Ala Leu Thr Lys
148 100 105 110
149 Tyr Pro Asp Asp Ile Ala Asp Tyr Phe Lys Gln Ser Phe Pro Glu Gly
150 115 120 125
151 Tyr Ser Trp Glu Arg Thr Met Thr Phe Glu Asp Lys Gly Ile Val Lys
152 130 135 140
153 Val Lys Ser Asp Ile Ser Met Glu Glu Asp Ser Phe Ile Tyr Glu Ile
154 145 150 155 160
155 Arg Phe Asp Gly Met Asn Phe Pro Pro Asn Gly Pro Val Met Gln Lys
156 165 170 175
157 Lys Thr Leu Lys Trp Glu Pro Ser Thr Glu Ile Met Tyr Val Arg Asp
158 180 185 190
159 Gly Val Leu Val Gly Asp Ile Ser His Ser Leu Leu Leu Glu Gly Gly
160 195 200 205
161 Gly His Tyr Arg Cys Asp Phe Lys Ser Ile Tyr Lys Ala Lys Lys Val
162 210 215 220
163 Val Lys Leu Pro Asp Tyr His Phe Val Asp His Arg Ile Glu Ile Leu
164 225 230 235 240
165 Asn His Asp Lys Asp Tyr Asn Lys Val Thr Leu Tyr Glu Asn Ala Val
166 245 250 255

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Input Set : D:\seqlist.txt

Output Set: N:\CRF3\05162002\J006922A.raw

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167 Ala Arg Tyr Ser Leu Leu Pro Ser Gln Ala
168                260                265
171 <210> SEQ ID NO: 5
172 <211> LENGTH: 693
173 <212> TYPE: DNA
174 <213> ORGANISM: Zoanthus species
176 <400> SEQUENCE: 5
177 atggctcagt caaagcacgg tctaacaaaa gaaatgacaa tgaaataccg tatggaaggg 60
178 tgcgtcgatg gacataaatt tgtgatcacg ggagagggca ttggatatcc gttcaaaggg 120
179 aaacaggcta ttaatctgtg tgtggtcgaa ggtggacat tgccatttgc cgaagacata 180
180 ttgtcagctg cctttatgta cggaaacagg gttttcactg aatatcctca agacatagct 240
181 gactatttca agaactcgtg tcctgctggg tatacatggg acaggtcttt tctctttgag 300
182 gatggagcag ttgtcatatg taatgcagat ataacagtga gtgttgaaga aaactgcatg 360
183 tatcatgagt ccaaatttta tggagtgaat tttcctgctg atggacctgt gatgaaaaag 420
184 atgacagata actgggagcc atcctgcgag aagatcatac cagtacctaa gcaggggata 480
185 ttgaaagggg atgtctccat gtacctcctt ctgaaggatg gtgggcgttt acggtgccaa 540
186 ttcgacacag tttacaagc aaagtctgtg ccaagaaaga tgccggactg gcacttcatac 600
187 cagcataagc tcaccctgta agaccgcagc gatgctaaga atcagaaatg gcatctgaca 660
188 gaacatgcta ttgcatccgg atctgcattg ccc 693
190 <210> SEQ ID NO: 6
191 <211> LENGTH: 231
192 <212> TYPE: PRT
193 <213> ORGANISM: Zoanthus species
195 <400> SEQUENCE: 6
196 Met Ala Gln Ser Lys His Gly Leu Thr Lys Glu Met Thr Met Lys Tyr
197 1 5 10 15
198 Arg Met Glu Gly Cys Val Asp Gly His Lys Phe Val Ile Thr Gly Glu
199 20 25 30
200 Gly Ile Gly Tyr Pro Phe Lys Gly Lys Gln Ala Ile Asn Leu Cys Val
201 35 40 45
202 Val Glu Gly Gly Pro Leu Pro Phe Ala Glu Asp Ile Leu Ser Ala Ala
203 50 55 60
204 Phe Asn Tyr Gly Asn Arg Val Phe Thr Glu Tyr Pro Gln Asp Ile Ala
205 65 70 75 80
206 Asp Tyr Phe Lys Asn Ser Cys Pro Ala Gly Tyr Thr Trp Asp Arg Ser
207 85 90 95
208 Phe Leu Phe Glu Asp Gly Ala Val Cys Ile Cys Asn Ala Asp Ile Thr
209 100 105 110
210 Val Ser Val Glu Glu Asn Cys Met Tyr His Glu Ser Lys Phe Tyr Gly
211 115 120 125
212 Val Asn Phe Pro Ala Asp Gly Pro Val Met Lys Lys Met Thr Asp Asn
213 130 135 140
214 Trp Glu Pro Ser Cys Glu Lys Ile Ile Pro Val Pro Lys Gln Gly Ile
215 145 150 155 160
216 Leu Lys Gly Asp Val Ser Met Tyr Leu Leu Leu Lys Asp Gly Gly Arg
217 165 170 175
218 Leu Arg Cys Gln Phe Asp Thr Val Tyr Lys Ala Lys Ser Val Pro Arg
219 180 185 190
220 Lys Met Pro Asp Trp His Phe Ile Gln His Lys Leu Thr Arg Glu Asp

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221          195          200          205
222 Arg Ser Asp Ala Lys Asn Gln Lys Trp His Leu Thr Glu His Ala Ile
223          210          215          220
224 Ala Ser Gly Ser Ala Leu Pro
225 225          230
228 <210> SEQ ID NO: 7
229 <211> LENGTH: 865
230 <212> TYPE: DNA
231 <213> ORGANISM: Zoanthus species
233 <400> SEQUENCE: 7
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235 catggctcat tcaaagcacg gtctaaaaga agaaatgaca atgaaatacc acatggaagg 120
236 gtgcgtcaac ggacataaat ttgtgacac gggcgaaggc attggatata cgttcaaagg 180
237 gaaacagact attaattctgt gtgtgatcga aggggggacca ttgccatttt ccgaagacat 240
238 attgtcagct ggctttaagt acggagacag gatttttcaact gaatatcctc aagacatagt 300
239 agactatttc aagaactcgt gtctgtctgg atatacatgg ggcaggtctt ttctctttga 360
240 ggatggagca gtctgcatat gcaatgtaga tataacagtg agtgtcaaag aaaactgcat 420
241 ttatcataag agcatattta atggaatgaa ttttcctgct gatggacctg tgatgaaaaa 480
242 gatgacaact aactgggaag catcctgcga gaagatcatg ccagtaccta agcaggggat 540
243 actgaaaggg gatgtctcca tgtacctcct tctgaaggat ggtgggcgtt accggtgcc 600
244 gttcgacaca gtttacaaag caaagtctgt gccaaagtaag atgccggagt ggcacttcat 660
245 ccagcataag ctctccgtg aagaccgcag cgatgctaag aatcagaagt ggcagctgac 720
246 agagcatgct attgcattcc cttctgcctt ggctgataa gaatgtagtt ccaacatttt 780
247 aatgcatgtg cttgtcaatt attctgataa aaatgtagtt gagttgaaaa cagacaagta 840
248 caaataaagc acatgtaa at cgtct 865
250 <210> SEQ ID NO: 8
251 <211> LENGTH: 230
252 <212> TYPE: PRT
253 <213> ORGANISM: Zoanthus species
255 <400> SEQUENCE: 8
256 Met Ala His Ser Lys His Gly Leu Lys Glu Glu Met Thr Met Lys Tyr
257 1          5          10          15
258 His Met Glu Gly Cys Val Asn Gly His Lys Phe Val Ile Thr Gly Glu
259          20          25          30
260 Gly Ile Gly Tyr Pro Phe Lys Gly Lys Gln Thr Ile Asn Leu Cys Val
261          35          40          45
262 Ile Glu Gly Gly Pro Leu Pro Phe Ser Glu Asp Ile Leu Ser Ala Gly
263          50          55          60
264 Phe Lys Tyr Gly Asp Arg Ile Phe Thr Glu Tyr Pro Gln Asp Ile Val
265 65          70          75          80
266 Asp Tyr Phe Lys Asn Ser Cys Pro Ala Gly Tyr Thr Trp Gly Ser Phe
267          85          90          95
268 Leu Phe Glu Asp Gly Ala Val Cys Ile Cys Asn Val Asp Ile Thr Val
269          100          105          110
270 Ser Val Lys Glu Asn Cys Ile Tyr His Lys Ser Ile Phe Asn Gly Met
271          115          120          125
272 Asn Phe Pro Ala Asp Gly Pro Val Met Lys Lys Met Thr Thr Asn Trp
273          130          135          140
274 Glu Ala Ser Cys Glu Lys Ile Met Pro Val Pro Lys Gln Gly Ile Leu

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 05/16/2002
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 8,12,13,17,65,77,102,104

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/006,922A

DATE: 05/16/2002

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Input Set : D:\seqlist.txt

Output Set: N:\CRF3\05162002\J006922A.raw

L:16 M:270 C: Current Application Number differs, Replaced Current Application Number
L:17 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:109 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:110 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:60